



Docket No. 10151

AF/1764  
 9/26/00  
 Not

## IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

In re Patent Application of: )  
 W. Roth et al )  
 Serial No. 09/305,019 ) Examiner: Tam Nguyen  
 Filed: May 4, 1999 ) Group Art Unit: 1764  
 For: ALKYLAROMATICS PRODUCTION )

## RESPONSE UNDER 37 CFR 1.116

ATT: BOX AF  
 Commissioner for Patents  
 Washington, D.C. 20231

Sir:

In response to the Examiner's Office Action of July 20, 2000 finally rejecting the present claims, please consider the following remarks.

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REMARKS

The present invention relates to an alkylation/transalkylation process in which at least the transalkylation step is effected in the liquid phase in a separate transalkylation reactor. Thus, liquid phase alkylation/transalkylation processes are of increasing commercial importance since, by operating at lower temperatures, they result in lower yields of unwanted by-products. However, as stated in the opening to the specification, such liquid phase processes suffer from the problem that their lower operating temperatures increase the activity requirements of the catalyst particularly in the transalkylation step. According to the invention, it has now been found that small crystal (<0.5 micron), TEA-mordenite has unexpectedly high activity when used as a liquid phase transalkylation catalyst. In particular, small crystal TEA-mordenite exhibits